

Section of Dermatology

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Ringworm of the Scalp treated by Thallium Acetate Epilation.

By G. B. DOWLING, M.D.

THE technique advised by Buschke has been followed; that is, a single dose has been given by the mouth in sweetened water. The actual dose given has been in one case 8 mgm. per kilo of body weight, in the other two 8.5 mgm. The first case was treated seven weeks ago; the second and third four weeks ago; the fourth treated was seventeen days ago, and the child is now shedding the hair.

Technique.—The patient should be very carefully weighed, preferably twice on different days. The dose of thallium acetate must be accurately calculated to the nearest mgm. and administered in water. Buschke found that mixing the thallium with food was unsatisfactory, as the epilation partly failed.

The hair begins to loosen on the seventh day, falls out rapidly between the fourteenth and nineteenth day, and is all out by the nineteenth day.

Re-growth begins practically at once. A curious occasional feature in the early stage of re-growth is the presence of enormous numbers of exclamation-mark hairs scattered all over the scalp.

The infected hairs seem to resist epilation more readily than do the normal hairs, but they usually fall a few days later.

Toxic effects have occurred in about 25 per cent. of cases in which I have administered thallium, but as in a number of these cases the treatment is not yet completed the percentage will probably be higher.

All these toxic reactions have been mild, and have been relieved by rest in bed. In practically every case affected, pains in the lower limbs have been complained of, with some loss of appetite in a few cases, and in one case headache was a transient symptom occurring at the time of epilation. The pains in the limbs occur about ten days after the dose, and pass off at about the time of epilation, eight to ten days later. No symptoms of any kind have been observed in the first week.

In Buschke's cases there were no toxic symptoms of any kind, and he was able to produce complete epilation with 8 mgm. per kilo. We conclude therefore that: (1) the thallium used should be biologically standardized; (2) it should be freshly made and absolutely pure; (3) the patients should, if possible, be kept in bed throughout the treatment.

Discussion.—Dr. S. MONCKTON COPEMAN, F.R.S., said that the cases in which he had been using thallium acetate were not comparable with those described by Dr. Dowling. Dr. Semon had that day seen cases treated with this drug in the wards of one of the metropolitan infirmaries, in which he (the speaker) was carrying on this work in conjunction with Professor Dixon, of Cambridge. The patients were almost all old people (one was a woman, aged 78), the subjects of far-advanced cancer, and so nearly moribund that to attempt treatment seemed almost absurd. More thallium was given to these patients than in the dose given to children and young adults, solely administered—so he understood from Dr. Semon—for epilation purposes. In his (Dr. Copeman's) first few cancer cases thallium acetate was given by the mouth, and Members of this Section might be interested to learn that in none of these cases did any epilation occur. The dosage was 1 gr. each day for eight, eleven, thirteen, nineteen and twenty-eight days respectively. In all these cases death had occurred before a longer time had elapsed. Although there had been no alopecia, there had been other symptoms, chiefly nervous, such as, for instance, tingling in the legs, feet, toes, arms and fingers. As oral administration appeared to be unsatisfactory the drug was injected intramuscularly into the gluteal region. Somewhat similar, but—with regard to the effect on cancer—better results followed the change of method. Dr. Semon had estimated that in the cases seen that day at least four times the amount of thallium given to children had been given. Of course, in the cancer cases the patients, being adults, were heavier than children, a fact which would tend to

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somewhat equalize the dose according to body-weight. In all these cases alopecia had developed, and in one or two nervous symptoms had appeared. One patient had distinctly mental symptoms and at the end of a week, during which he had had three injections of the drug, he had suddenly manifested delusions of persecution, and it had been necessary to send him to an institution for mental cases. He was now back, and well. In his case there had not been any alopecia at all, though the dosage had been considerably higher than the usual one for children. One patient had had diarrhoea and abdominal pain, and in that case it was considered wise to stop the drug. A week after the administration was stopped the hair began to fall out. That was about a month ago. All the patients were now beginning to recover their hair.

The reason why thallium salts were given in the cancer cases was because of their special action on epidermal tissues, and also because in the periodic scale thallium was placed near to lead, the use of which in cancer had apparently afforded some good results at Liverpool. During the last eighteen months many experiments in connexion with the pharmacology of thallium acetate had been carried out on animals in Professor Dixon's laboratory at Cambridge, and workers there found that it had not only an effect on the hair, but also, he understood, on the generative system; evidently it had the same effect as lead in destroying the very early fœtus.

In those animals the effect on the growth of the hair was interesting. When animals were shaved on the abdomen, a comparatively small dose of thallium acetate had the reverse effect, causing the hair to grow more rapidly. When, however, the dose was doubled or trebled, epilation took place as usual.

Obviously certain effects of thallium were very undesirable, and considerable caution should be observed in using it, though its exact toxicity—as compared with that of lead, for instance—had not yet been definitely determined. In order to obtain other effects of the drug, while avoiding epilation, if possible, he (Dr. Copeman) was now using intramuscular injections of a colloidal preparation of thallium iodide, prepared under Professor Dixon's supervision, in the Cambridge University chemical laboratory. This preparation, in contrast to thallium acetate, was extremely insoluble, the idea being that, by securing continuous, very slow absorption, it might perhaps prove possible to avoid, in cancer cases, that special effect which it was sometimes the aim of Members of this Section to attain.

Dr. H. C. SEMON said that in a case he was now treating with krysolgan, in which the same type of symptoms had developed—pain in the joints, and especially at the back of the neck—due probably to the presence of gold in the circulation, he had, two days ago, administered a dose of thiosulphate of soda, in the attempt to antagonize those symptoms. The result was that within three or four hours the patient was completely free from pain, and slept comfortably for the first time since she had been taking the krysolgan. The atomic weights of gold (197·2) and thallium (204) were very approximate (197·2—204), and so for these similar subjective symptoms the thiosulphate of soda might prove to be useful.

Recurring Eruption : ? Artefact.

By G. B. DOWLING, M.D.

THIS girl, aged 13, has had a recurring eruption on the forearms and backs of the hands for two years, and occasionally on the nose. The history is that about two years ago she was associated with a woman who had a bullous eruption, and afterwards "round blisters" developed on the hands and forearms, and sometimes on the nose. The patient is a very neurotic girl, and prone to fits of temper. She began to menstruate at the unusually early age of 10, and she is obviously very over-developed for her age. These spots generally come out when she is particularly irritable, and this is often just before the menses are due. My first diagnosis was neurotic excoriations (type acné excoriée des jeunes filles), because the lesions were round, and she was obviously in the habit of scratching them. But then